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P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

LAM, TUAN THIEU

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT F. PAYNE, BHAVESH G. BHAKTA,
SRIDHAR RAMASWAMY, and SONG WU

Appeal 2009-012990
Application 10/765,377
Technology Center 2800

Before MAHSHID D. SAADAT, CARLA M. KRIVAK, and
BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

SUMMARY

Appellants appeal under 35 U.S.C. § 134(b) from the Examiner's rejections of claims 1 and 2:

- (1) Claims 1 and 2 stand rejected under 35 U.S.C. § 102(e) as anticipated by Komoriya (US 4,253,163; issued Feb. 24, 1981).
- (2) Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as obvious over Branson (US 5,508,644; issued Apr. 16, 1996) in view of Kanamori (US 2002/0171453 A1; published Nov. 21, 2002).

We affirm.

STATEMENT OF THE CASE

Appellants describe their invention as relating to sense amplifiers (Abstract). Independent claim 1 is representative:¹

1. A sense amplifier, comprising:
 - a regenerative latch;
 - an input differential pair of transistors coupled to the regenerative latch;
 - a leakage device coupled to each of the transistors comprising the input differential pair of transistors, said leakage device adapted to maintain the input differential pair of transistors in an on state during a pre-charge phase; and
 - wherein the regenerative latch comprises a first transistor coupled between the pair of transistors, a second transistor coupled to a first one of the pair of transistors, and a third transistor coupled to a second one of the pair of transistors, wherein the first, second, and third transistors are controlled by a clock signal node.

¹ Appellants argue claims 1 and 2 together as a group. *See* App. Br. 5-7. Accordingly, we select independent claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(vii).

FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a preponderance of the evidence:

1. Appellants' Specification expressly defines the term "'couple' . . . to mean either an indirect or direct connection" (Spec. 2). The Specification further explains, "[t]hus, if a first device couples to a second device, that connection may be through a direct connection, or through an indirect connection via other devices and connections" (Spec. 2-3).

CONTENTIONS AND ANALYSIS

THE ANTICIPATION REJECTION

Appellants contend Komoriya does not disclose the claim language "a leakage device coupled to each of the transistors comprising the input differential pair of transistors, said leakage device adapted to maintain the input differential pair of transistors in an on state during a pre-charge phase" (App. Br. 5).² Specifically, Appellants contend, "[Komoriya] teaches a first transistor T11 coupled to the first differential transistor and a second transistor T12 coupled to the second differential transistor, instead of one device coupled to both differential transistors" (App. Br. 5-6).

This argument is not persuasive because the Examiner does not rely on transistors T11 and T12 for satisfying this claimed "leakage device." The Examiner, instead, relies on transistor T13 as constituting the leakage device (Ans. 4). Transistor T13 is coupled to respective transistors of the pair of

² Rather than repeat Appellants' arguments or the Examiner's positions in their entirety, throughout this opinion we refer to the following documents for their respective details: (1) the Appeal Brief ("App. Br.") filed May 9, 2006; and (2) the Examiner's Answer ("Ans.") mailed Oct. 30, 2007.

differential input transistors T1 and T2 via the indirect connections that include transistors T5 and T6 (Ans. 4-5). Appellants have not provided any arguments as to why transistor T13 cannot read on the claimed leakage device (App. Br. 5-6). Moreover, Appellants' Specification indicates that the claim term "coupled" has a meaning broad enough to include indirect connections (Fact 1).

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's anticipation rejection of representative claim 1. We therefore sustain the Examiner's rejection of that claim, as well as of dependent claim 2, which is not separately argued.

THE OBVIOUSNESS REJECTION

The Examiner finds that Branson discloses every element of representative claim 1 except for "a first [sic: third] transistor coupled between the [input differential] pair of transistors [20, 22]" (Ans. 4). The Examiner further finds, Kanamori teaches a sense amplifier that includes a clocked transistor coupled in between a pair of differential input transistors (*id.*). The Examiner additionally sets forth a rationale for why one would have been motivated to include such a clocked transistor between Branson's differential input transistors (*id.*).

Appellants do not dispute the Examiner's finding that one would have been motivated to modify Branson so as to couple Kanamori's clocked transistor between both of Branson's different input transistors (App. Br. 6). Appellants do not dispute that control signal latch enable (LE), which controls transistors 34 and 36, constitutes a clock signal. Appellants solely contend that "[n]othing in [Branson and Kanamori] teaches that the transistor coupled between the differential transistors in [Kanamori] would

be controlled by the same clock signal node that controls transistors 34 and 36 of [Branson]” (*id.*).

This argument is not persuasive. The fact that a clock is applied to all three transistors of a circuit produced according to the combined prior art (Branson’s transistors 34, 36, and Kanamori’s transistor 140) implies that the clock signals would be at the same potential, or at the same “clock signal node,” as recited by claim 1.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner’s obviousness rejection of representative claim 1. We therefore sustain the Examiner’s rejection of that claim, as well as of dependent claim 2, which is not separately argued.

DECISION

The Examiner’s decision rejecting claims 1 and 2 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2010).

AFFIRMED

gvw